

## **REMARKS**

Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

### **I. CLAIM STATUS AND AMENDMENT**

Claims 1-11 were pending in this application when last examined.

Claims 1-11 were examined on the merits and stand rejected.

Claim 1 is amended herein to clarify the claimed invention. Support for this amendment may be found in the claims as originally filed and in the specification on page 5, lines 14-17, and page 6, lines 18-21.

No new matter has been added.

### **II. REJECTION UNDER 35 USC 103(a)**

On pages 2-4 of the Office Action, claims 1-11 remain rejected under 35 USC § 103(a) as being unpatentable over JP 02-151677 (English Abstract; of record).

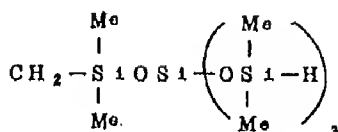
Applicants respectfully traverse this rejection as applied to the amended claims.

i) The grounds of rejection are based on obviousness over from JP 02-151677 (hereinafter JP '677), as in the first Office Action. However, Applicants submit the Examiner's understanding of JP '677 is not correct.

JP '677 describes two kinds of compositions of an "adhesive composition" and a "hydrosilylation reaction curable composition".

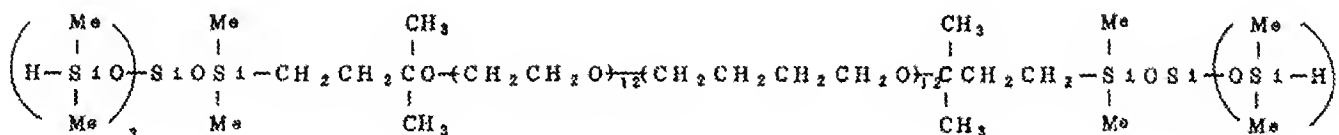
The "adhesive composition" described in the claims of JP '677 is comprised of (A) alkenyl group-containing polyether having an average molecular weight of 10000-5000000, (B) an organic solvent, and (C) a platinum compound catalyst (claim 1 and English abstract). In comparison, the "hydrosilylation reaction curable composition" is an object to be applied with the above-mentioned "adhesive composition" (English abstract), and JP '677 recites a composition comprised of alkenyl group-containing polyether, Si-H group-containing polyorganohydrogensiloxane (or Si-H group-containing polyether), and a platinum compound catalyst, as an example of the "hydrosilylation reaction curable composition" (English abstract, page 601, right column, lines 6-10, and page 603, lower right column, lines 3-6).

In the Office Action, the Examiner holds that JP '677 relates to an adhesive composition produced by mixing 1) alkenylated polyether having an average MW of 10000-5000000, 2) 0.1-10000 ppm of platinum compound catalyst, and 3) Si-H-containing polyorganohydrogensiloxane, for example,



(Office Action, page 2, item 4). As mentioned above, in JP '677, Si-H-containing polyorganohydrogensiloxane (or Si-H group-containing polyether) is a component of the “hydrosilylation reaction curable composition” and is not a component of the “adhesive composition”.

The above-mentioned structural formula pointed out by the Examiner is poly(dimethylsiloxane) (segment) extracted from the terminal of Si-H group-containing polyether having an average structural formula:



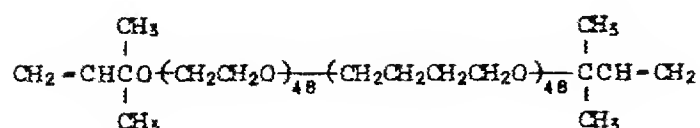
, which is a component of the “hydrosilylation reaction curable composition” used in the Example (see page 605, upper left column), and is not a component of the “adhesive composition”.

As is clear from the above, the Examiner incorrectly understands JP '677 and concludes in the Office Action, (page 3, lines 11-15 and page 4, lines 3-7) that “JP '677 teaches generally the same chemistry for the same end use (adhesive) as the claimed invention”. The “adhesive composition” described in JP '677 does not contain Si-H-containing polyorganohydrogensiloxane (or Si-H group-containing polyether), and therefore, does not teach generally the same chemistry as the adhesive composition comprising “compound (B) having 1 - 10 hydrosilyl groups in a molecule” as an essential component of claim 1 of the present application. As such, Applicants respectfully submit that the grounds of rejection are improper.

ii) As mentioned above, the adhesive composition described in JP '677 does not contain a compound corresponding to "compound (B) having 1 - 10 hydrosilyl groups in a molecule" in the present application, and does not teach the adhesive composition of claim 1 of the present application.

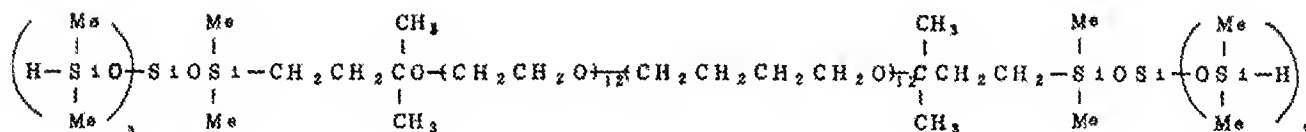
In comparison, the hydrosilylation reaction curable composition described in Example, which comprises

alkenyl group-containing polyether represented by average structural formula:



(corresponding to polyether polymer (A) of the claimed invention;  $\text{C}_{298}\text{H}_{594}\text{O}_{97} = \underline{5730}$ ) 92.44 parts by weight,

Si-H group-containing polyether represented by average structural formula:



(corresponding to compound (B) of the present invention;  $\text{C}_{98}\text{H}_{218}\text{O}_{33}\text{Si}_{10} = \underline{2206}$ ) 7.5 parts by weight, and

a platinum compound catalyst 0.06 part by weight

(page 604, lower right column - page 605, upper left column; note: average structural formula from page 604 to page 605 was amended on page 609 (Amendment), right column, item 12) is similar to the adhesive composition of the present application, since it contains polyether having an alkenyl group, a compound having an Si-H group, and a hydrosilylation catalyst.

In addition, the molar ratio of the hydrosilyl group/alkenyl group of the hydrosilylation reaction curable composition is assumed to be 0.63 [ $\{(7.5/2206) \times 6\} / \{(92.44/5730) \times 2\} = 0.63$ ]. Therefore, the hydrosilylation reaction curable composition satisfies the molar ratio (0.3-0.8) of the hydrosilyl group/alkenyl group defined in claim 1 of the present application.

Regarding the adhesiveness of the hydrosilylation reaction curable composition, JP '677 describes that the curable composition does not adhere to plastic in curing, and an adhesive needs to be used (page 601, right column, lines 10-13). Thus, the hydrosilylation reaction curable composition described in JP '677 does not have adhesiveness.

Therefore, JP '677 proposes to improve insufficient adhesion between a cured product of a hydrosilylation reaction curable composition and plastic, particularly between a cured product of a dental impression material comprised of a hydrosilylation reaction curable composition and a plastic tray, with the adhesive composition comprised of (A) alkenyl group-containing polyether having a specific molecular weight, (B) an organic solvent, and (C) a platinum compound catalyst, which is described in the claim (English abstract, page 601, left column, line 3 from the bottom - page 602, upper right column, line 6).

The attached is a photograph showing a dental impression material and a plastic tray available from the internet. In general, a dental impression material cures in a comparatively short time upon contact with a tooth to form a precise impression, after which it is removed from the tooth. Also from this point, it is clear that the hydrosilylation reaction curable composition described in JP '677 does not show adhesiveness by curing.

The pressure-sensitive adhesive sheet of the present invention can be formed without using an organic solvent (present specification, page 2, lines 22-26), has sufficient adhesive force to the skin, can be peeled off without damaging the skin, and shows sufficient adhesive force even after repetitive adhesion (present specification, page 12, lines 20-24).

That is, the adhesive composition constituting the adhesive layer does not use an organic solvent but a cured product thereof shows superior adhesiveness to the skin (adhesive property), which is completely different from the hydrosilylation reaction curable composition described in JP '677. This is attributable to the molecular weight characteristic of polyether polymer (A) having an alkenyl group and compound (B) having a hydrosilyl group, which are completely different from those of the hydrosilylation reaction curable composition described in JP '677.

The amendment to claim 1 at this time clarifies such characteristics. As mentioned above, the average molecular weights of the alkenyl group-containing polyether and Si-H group-containing polyether in the hydrosilylation reaction curable composition used in the Example of JP '677 are assumed to be 5730 and 2206, respectively, which are vastly different from the number average molecular weight (10000-30000) of polyether polymer (A) and the number

average molecular weight (500-1000) of compound (B) having a hydrosilyl group in claim 1 of the present application.

iii) As mentioned above, the adhesive composition of the pressure-sensitive adhesive sheet of the claimed invention is clearly different from the “adhesive composition” and “hydrosilylation reaction curable composition” described in JP '677.

Moreover, the “adhesive composition” described in JP '677 teaches away from the present invention since an organic solvent is an essential component therein, and the “hydrosilylation reaction curable composition” teaches away from the present invention since adhesiveness is not required. As such, the present invention is not obvious from JP '677.

Bearing the above in mind, Applicants respectfully submit that one skilled in the pertinent art would find no reason in the cited reference to modify or combine its teachings in order to arrive at the claimed invention, nor would he have any reasonable expectation of success in doing so.

Applicants respectfully submit that the rejections are untenable as applied to the amended claims and should therefore be withdrawn.

**CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is in condition for allowance and early notice to that effect is hereby requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact the undersigned attorney at the telephone number below.

Respectfully submitted,

Atsushi HAMADA et al.

/Jon T. Self/

Digitally signed by /Jon T. Self/  
DN: cn=/Jon T. Self/, o, ou,  
email=jself@wenderoth.com, c=US  
Date: 2010.09.30 14:26:09 -04'00'

By

\_\_\_\_\_  
Jon T. Self, Ph.D.

Registration No. 48,948

Attorney for Applicants

JTS/lkd

Washington, D.C. 20005-1503

Telephone (202) 721-8200

Facsimile (202) 721-8250

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